

Urogynecological Complex Chronic Pain- Novel Approach with Double Bipolar Radiofrequency for Intraurethral and Intravaginal Woman Disorders (NABIUR- RF Protocol)

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ABSTRACT

Objective: The purpose of this study was verifying the effectiveness of the use of double bipolar radiofrequency in the control of urethritis and trigonitis in three patients with complex chronic pain syndromes of the pelvic floor.

Methods: Three women were analyzed and studied for inclusion in the study and treatment. These are very complex cases with no resolution with previous treatments.

Previous studies were carried out, incontinence test, evaluation of pain scales, quality of life test, advanced echographic analysis such as elastography, low flow Doppler and 3D / 4D volumetric study of the urethral and vaginal area to be treated. Studies of flowmetry, cystoscopy, urethrocytography and analysis before and after with functional magnetic resonance were performed. We used the Pulstrode catheter at the urethral level and the bipolar radiofrequency Votiva Inmode for the treatment and vaginal approach.

Results: The three complex patients with severe pain above 7 on the analogue visual scale for pain decreased their pain by more than 4 points in the first 15 days after treatment. Two of them a month no longer present pain and only one pain was assessed in 2. The degree of satisfaction after the procedure was 100% for its clear improvement, absence of complications and improvement in quality of life.

Conclusion: 100% of patients improved in pain control, general satisfaction and improvement of quality of life. His level of frustration improved and limitations in social activities.

Keywords

Urogynecology, Radiofrequency, Chronic cystic diseases, Pelvic pain.

Introduction

Gynecologic and urologic etiologies are the sources of pelvic pain for many individuals. Among the chronic cystic diseases, the most frequent is chronic urethrotigonitis (or urethral syndrome) and interstitial cystitis, the latter being the most serious. The first description of interstitial cystitis in women was made by Hunner

in 1914 who referred to this condition as ulcerative cystitis because it described a certain type of erosion of the bladder mucosa accompanying these patients. Other authors have called it parenchymal cystitis and "neurotic bladder" [1].

Trigonitis is an inflammation of the bladder epithelium in the inner zone of the urinary bladder between the beginning of the urethra and the ureteral meatus, of diverse origin. Sometimes it starts after an inflammation and / or infection, although often the cause cannot be determined [2].

The most characteristic symptom is pain during urination, with the urgency to urinate and the feeling of not emptying the bladder as often as possible, with up to 60 trips to the bathroom in one day. It is a recurrent chronic disease, difficult treatment, complex and long-lasting. Classically it has been treated with instillations of various chemical substances, usually silver salts of officinal concentration (nitrate, protein, etc.) [3], administered by the specialist in a serial way. These substances act on the bladder mucosa producing a chemical peel, forcing a superficial cellular desquamation with stimulation of epithelial regeneration. This pathological condition is greatly influenced by stress, coming to be considered psychosomatic and as such has some seasonal behavior and great tendency to relapse. The treatment must be carried out by the specialist doctor (urologist, urogynecologist, pain expert), who will try to identify the causative agent of the crisis. Supportive psychotherapy should be performed in each session [4-6].

This chronic inflammatory pathological vesical picture that is characterized clinically by irritative symptoms similar to classic but persistent acute cystitis. There is dysuria, frequency, hypogastric pain, dyspareunia, etc. It is a very variable clinical picture and occurs especially in women of the third and fourth decade of life; In the most serious cases there is a decrease in bladder capacity that leads to a disabling situation. It usually presents without urinary infection, although in some cases it can complicate the situation [7].

The fundamental examination is cystoscopy, with or without anesthesia, depending on the severity of the case, which will provide information about bladder capacity and the presence of lesions of the bladder mucosa, such as redness and / or chronic inflammation lesions. In mild cases of urethral syndrome, chronic granulomatous and sometimes desquamative inflammation of the trigone and bladder neck can be seen. Sometimes there are pseudopolyps in the bladder neck that are edematous manifestations of this inflammation. Reuter describes, from the endoscopic point of view, glandular, follicular, granulomatous and cystic lesions. There are also, but in a more exceptional way, vesical leukoplakias, which are chronic fibrous and proliferative inflammations; these can even be pretumoral [8].

Material and Method

Three women were analyzed and studied for inclusion in the study and treatment. These are very complex cases with no resolution with previous treatments.

NABIUR- RF Protocol was applicate (Non ablative Bipolar urethral radiofrequency with pulstrode Catheter) and VOTIVA, Forma V treatment with Inmode Technology (Figure 1).

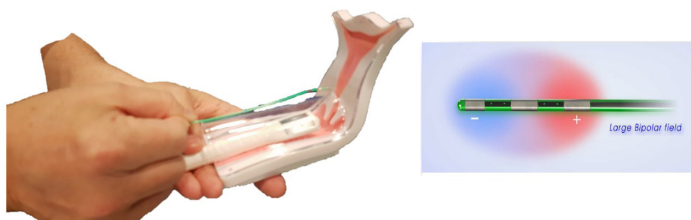


Figure 1: We show the technique used. Above you can observe the Pulstrode catheter that we introduce into the urethra, trigone and bladder and below you can observe the VOTIVA Inmode hand piece [figure 3] for intravaginal bipolar radiofrequency treatment.

Previous studies were carried out, incontinence test, evaluation of pain scales, quality of life test, advanced echographic analysis such as elastography, low flow Doppler and 3D / 4D volumetric study of the urethral and vaginal area to be treated. Studies of flowmetry, urethrocytography and analysis before and after with functional magnetic resonance were performed. We used the Pulstrode catheter at the urethral level and the bipolar radiofrequency Votiva Inmode for the treatment and vaginal approach (Figures 2 and 3).



Figure 2: Real-time viewing of the Pulstrode catheter. Its correct localization is possible in the different target through advanced ultrasound and through X-rays, even with the possibility of using contrast for its work channels.



Figure 3: VOTIVA Forma V, hand piece, Bipolar radiofrequency for intravaginal approach and Catheter Pulstrode.

Results

The three complex patients with severe pain above 7 on the analogic visual scale for pain decreased their pain by more than 4 points in the first 15 days after treatment. Two of them a month no longer present pain and only one pain was assessed in 2. The degree of satisfaction after the procedure was 100% for its clear improvement, absence of complications and improvement in quality of life.

Elastographic changes were detected in all patients. The degree of quantitative and qualitative elasticity was measured before, during and after treatment and during follow-up (Figure 4). Tissue retraction and better elasticity recovery were confirmed by improving angiogenesis. We do not observe complications or sequelae in subsequent explorations with magnetic resonances.

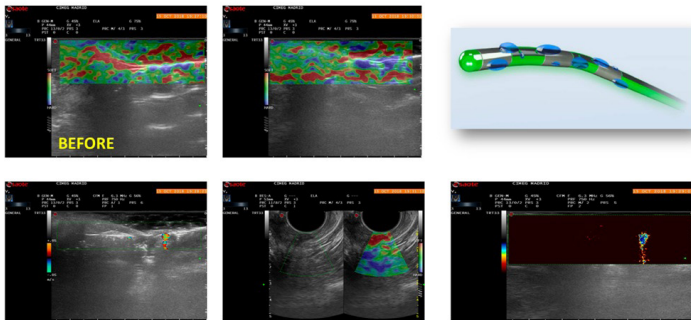
INTRAURETRAL APPROACH with PULSTRODE® Cateter**Technique – Advanced Ultrasound (Elastography and Flow Doppler)**

Figure 4: In the image you can observe the elastographic change; step from a state of diminution of the tissue elasticity (red color) to another state of greater retraction and hardness (blue color).

Conclusion

100% of patients improved in pain control, general satisfaction and improvement of quality of life. His level of frustration improved and limitations in social activities.

Recommendation

We recommend continuing to increase the number of cases to use this technique since it is safe, easy to perform and represents an alternative, a new tool that improves the quality of life of our patients.

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